

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,479	07/18/2001	Gregory Rose	10559-450001 / P10767	1628
20985	7590	09/02/2004	EXAMINER	
FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081			CAO, CHUN	
			ART UNIT	PAPER NUMBER
			2115	

DATE MAILED: 09/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/910,479	ROSE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Chun Cao	2115	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 July 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2/21/03, 3/29/04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

1. Claims 1-23 are presented for examination.
2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The current title is imprecise.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 6-7, 9-10, 14, 17-18, 21 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Bland et al. (Bland), U.S. patent no. 5,517,650.

Bland is a prior art reference cited by applicant.

As per claim 1, Bland discloses a circuit [fig. 4] comprising:

a PAD signal line connectable to an external host line [fig. 5, col. 6, line 62-col. 7, line 2] ; a keeper stage configured to hold the PAD signal line in a weakly held state responsive to changes in the state of the external host signal [col. 7, lines 3-15].

As per claim 2, Bland discloses that the weakly held state is the last in time state of the external signal line [col. 7, lines 12-14].

As per claim 6, Bland discloses that a controllable output buffer stage which is able to drive the state of the PAD signal and having circuitry to enable and disable the output buffer stage based upon the state of an ENABLE signal [col. 6, lines 52-61].

Art Unit: 2115

As per claim 7, Bland discloses that a SLEEP signal which can enable and disable the keeper stage [col. 7, lines 3-15].

As to claims 9-10 and 14, Bland discloses the corresponding elements in claims 1-2 and 6, which are carried out the method of operating steps in claims 9 and 10. Accordingly, claims 9-10 and 14 are rejected for the same reason as set for claims 1-2 and 6.

As to claims 17-18 and 23 are written in mean plus function and contained the same limitations as claims 1-2 and 7. Therefore, same rejection is applied.

As per claim 21, Bland discloses that the circuitry is implemented in an integrated circuit [figs. 2, 4].

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5, 7, 8, 11-13, 15-16 and 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bland et al. (Bland), U.S. patent no. 5,517,650 in view of Bacigalupo (Bacigalupo), US patent no. 6,448,812.

As to claims 3 and 19, Bland does not explicitly disclose at least one controllable weak pull-up device and at least one controllable weak pull-down device.

Art Unit: 2115

Bacigalupo discloses that the keeper stage comprises at least one controllable weak pull-up device and at least one controllable weak pull-down device [fig. 2, col. 3, lines 51-61; col. 4, lines 18-20].

It would have been obvious to one of ordinary skill in the art at time the invention to combine the teachings of Bland and Bacigalupo because they are both directed to power management system, and the specify teachings of Bacigalupo stated above by weak pull-up and pull-down devices would increase the power consumption of Bland system by being capable of controlling power management system.

As to claims 4 and 20, Bacigalupo discloses that circuitry configured to disable the at least one weak pull-down device if the weak-pull up device is enabled and to disable the at least one weak pull-up device if the weak pull-down device becomes enabled [col. 3, lines 62-67; col. 4, line 45-col. 5, line 11].

As per claim 5, inherently, Bacigalupo discloses the control of the at least one controllable weak pull-up device comprises a logical NAND of a SLEEP signal and the PAD signal and the control of the at least one controllable weak pull-down device comprises a logical NOR of the inverted SLEEP signal and the PAD signal [col. 5, lines 27-61].

As to claims 7 and 23, Bacigalupo discloses that a SLEEP signal which can enable and disable the keeper stage [col. 4, lines 18-29].

As per claim 8, Bacigalupo discloses of controlling the at least one weak pull-up and the at least one weak pull-down device based upon the state of the SLEEP signal [col. 3, lines 62-67; col. 4, line 45-col. 5, line 11].

Art Unit: 2115

As to claims 11-13 and 15, Bland and Bacigalupo disclose the corresponding elements in claims 3-5 and 7, which are carried out the method of operating steps in claims 11-13 and 15. Accordingly, claims 11-13 and 15 are rejected for the same reason as set for claims 3-5 and 7.

As per claim 21, Bacigalupo discloses that the circuitry is implemented in an integrated circuit [fig. 2].

As to claims 16 and 22, Bacigalupo teaches that the controllable weak pull-up device and the controllable weak pull-down device are square devices [col. 3, lines 53-54].

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun Cao at (703) 308-6106 (571-272-3664, effective 10/14/2004). The examiner can normally be reached on Monday-Friday from 7:30 am - 4:00 pm. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor Thomas Lee can be reached at (703) 305-9717 (571-272-3667, effective 10/14/2004). The fax number for this Art Unit is following: Official (703) 872-9306.

Application/Control Number: 09/910,479

Page 6

Art Unit: 2115

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 306-5631 (571-272-2100, effective 10/14/2004)..

A handwritten signature in black ink, appearing to read 'Chun Cao', written in a cursive style.

Chun Cao

Sep. 1, 2004